DMSMS &
STANDARDIZATION
2011

# TOMCAT

## A Framework to Assess Obsolescence Management Capability

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August 30th, 2011

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# Report Documentation Page

*Form Approved*
*OMB No. 0704-0188*



| 1. REPORT DATE | 2. REPORT TYPE | 3. DATES COVERED |
|---|---|---|
| **30 AUG 2011** | | **00-00-2011 to 00-00-2011** |

| 4. TITLE AND SUBTITLE | 5a. CONTRACT NUMBER |
|---|---|
| **TOMCAT A Framework to Assess Obsolescence Management Capability** | 5b. GRANT NUMBER |
| | 5c. PROGRAM ELEMENT NUMBER |
| 6. AUTHOR(S) | 5d. PROJECT NUMBER |
| | 5e. TASK NUMBER |
| | 5f. WORK UNIT NUMBER |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)<br>**Cranfield University,Decision Engineering Centre,UK,** | 8. PERFORMING ORGANIZATION REPORT NUMBER |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) | 10. SPONSOR/MONITOR'S ACRONYM(S) |
| | 11. SPONSOR/MONITOR'S REPORT NUMBER(S) |

12. DISTRIBUTION/AVAILABILITY STATEMENT
**Approved for public release; distribution unlimited**

13. SUPPLEMENTARY NOTES
**Presented to: DMSMS and Standardization Conference, Hollywood, FL August 29- Sept 01 2011**

14. ABSTRACT

15. SUBJECT TERMS

| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| a. REPORT | b. ABSTRACT | c. THIS PAGE | | | |
| **unclassified** | **unclassified** | **unclassified** | **Same as Report (SAR)** | **19** | |

# Overview

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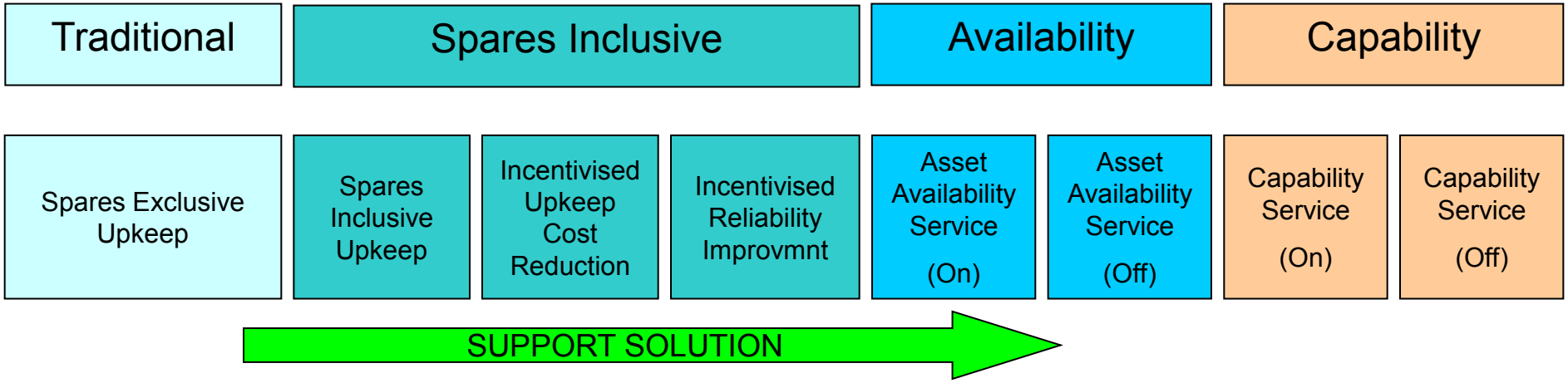
- Introduction
- TOMCAT Development
- Capability Metrics
- TOMCAT Validation
- Concluding Remarks

# Shifting the Risk




As the UK Ministry of Defence (MoD) moves across the Support Options Matrix away from the Traditional Support Solutions contracts to Availability / Capability contracts (Performance-Based Logistics), it is essential that MoD has confidence in Industry's capability to manage the risk of obsolescence.

# Obsolescence Management Capability Assessment

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If the MoD can measure OM capability, they will:

- Be able to improve OM capability across the supply chain.
- Be able to report on the status of an OM strategy.
- Provide incentives for a contractor.
- Ensure the risk is placed in the right place.

How can we do this consistently across Defence?

**TOMCAT**

**T**otal **O**bsolescence **M**anagement **C**apability **A**ssessment **T**ool

# Collaborators

**Project Sponsored by UK Ministry of Defence**


**Industrial Collaborators**

- BAE Systems
- Selex Galileo
- General Dynamics
- Component Obsolescence Group (COG)
- Joint Obsolescence Management Working Group (JOMWG)




# TOMCAT Development

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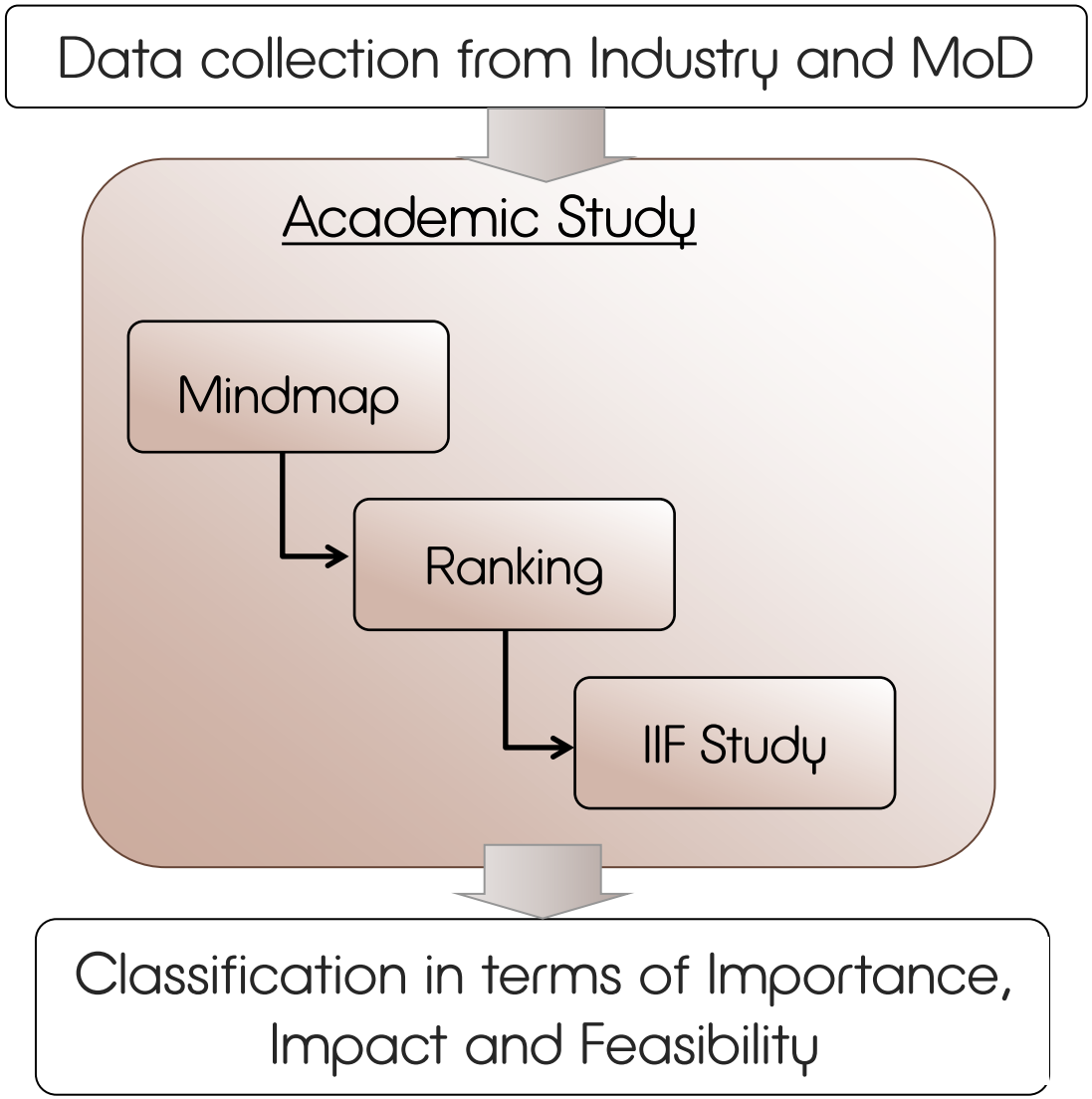
**Aim**

To develop a set of metrics for the MoD which will allow them to measure the current capability in obsolescence management of the contractors

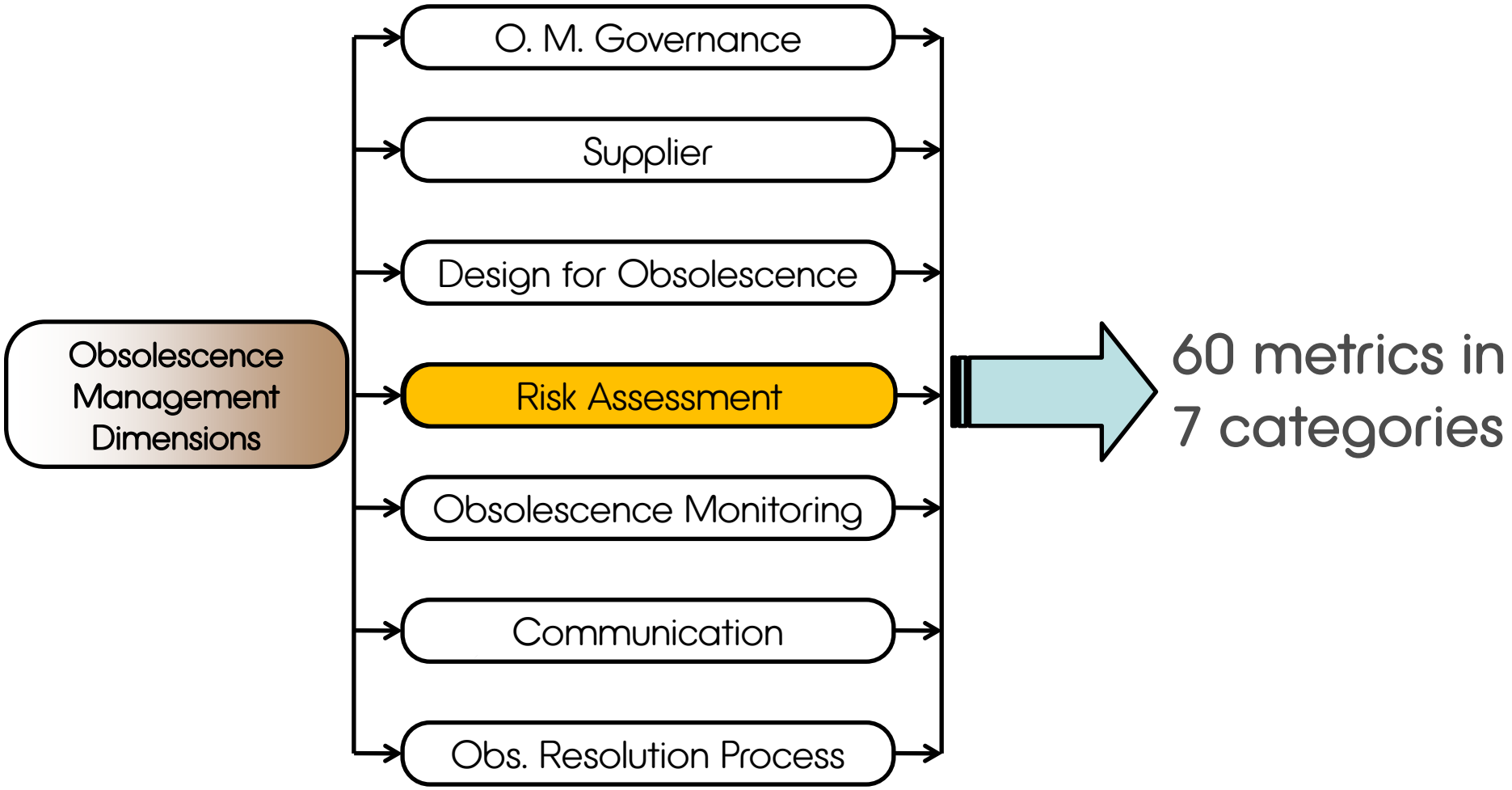
**Development**

- Developed over two years at Cranfield University
- 3.5 man years of effort
- Phases:
  - MSc group project
  - Commercial development
  - Knowledge Transfer project for professional tool development
- Extensive data collection from the major stakeholders within both MoD and Industry (semi-structured interviews, workshops and document analysis)

# Capability Metrics Development



# Capability Metrics Development



# Capability Metrics Development

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***How is the impact of change to legislation assessed and actioned as part of the risk assessment process? [10%]***

***How often is the risk assessment, formally revalidated? [20%]***

***How is the process to ensure the accuracy of data for the risk assessment defined? [10%]***

**RISK ASSESSMENT**

***How is the risk assessment conducted to identify and implement mitigation processes for the obsolescence risk? [40%]***

***How are decisions from the obsolescence risk assessments, obsolescence approach selections and the derived mitigation actions recorded on an appropriate OM risk register? [20%]***

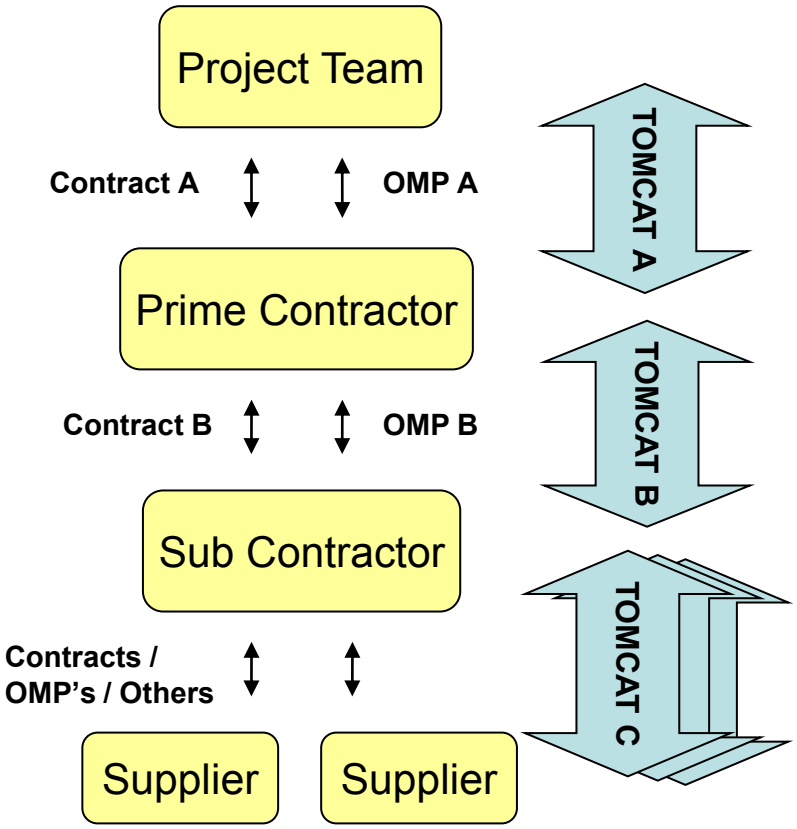
# Metrics selection

Workshops

60 metrics

25 metrics finalized

# TOMCAT Assessment Model



**Default Assessments**

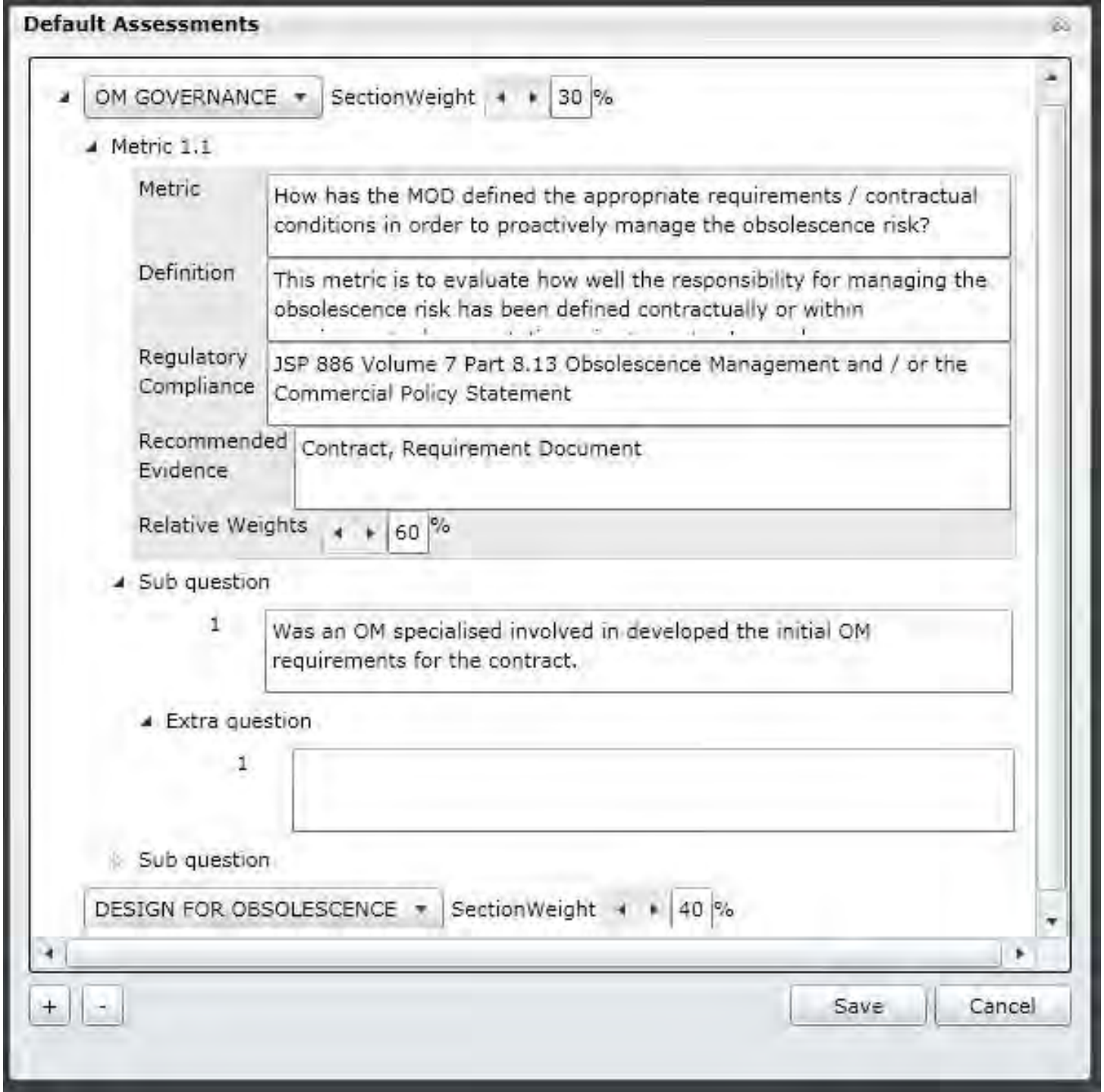
RISK ASSESSMENT — SectionWeight 30 %

- Metric 4.1
  - Metric: How is the risk assessment conducted to identify and implement mitigation processes for the obsolescence risk?
  - Definition: This metric is intended to validate if an effective risk assessment and mitigation process is in place.
  - Regulatory Compliance: BS EN 62402:2007, paragraph 7.1.3 – Obsolescence Management in the context of risk management to paragraph 7.1.5 – Assessment of
  - Recommended Evidence: OMP, procedures, reports from an OM risk register
  - Relative Weights: 60 %
  - Sub question
    - 1: Is the risk assessment process conducted in accordance with the IEC 62402:2007 triplet of Impact, Probability and Cost?
    - Extra question
      - 1:
    - Sub question

DESIGN FOR OBSOLESCENCE — SectionWeight 40 %

+ -

Save Cancel


Default Assessments
OM GOVERNANCE
SectionWeight
30
%
Metric 1.1
Metric
How has the MOD defined the appropriate requirements / contractual conditions in order to proactively manage the obsolescence risk?
Definition
This metric is to evaluate how well the responsibility for managing the obsolescence risk has been defined contractually or within
Regulatory Compliance
JSP 886 Volume 7 Part 8.13 Obsolescence Management and / or the Commercial Policy Statement
Recommended Evidence
Contract, Requirement Document
Relative Weights
60
%
Sub question
1
Was an OM specialised involved in developed the initial OM requirements for the contract.
Extra question
1
Sub question
DESIGN FOR OBSOLESCENCE
SectionWeight
40
%
+
-
Save
Cancel

# TOMCAT

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*Obsolescence Metrics* *[Version.1.1]*

TOMcat

Results

| | | | |
|---|---|---|---|
| *Section 1* | **Obsolescence Management Governance** | | |
| 1 | How has the MOD defined the appropriate requirements / contractual conditions in order to proactively manage the obsolescence risk? | 70 | ☐ Not Applicable |
| 2 | How has Obsolescence Management been considered as part of the organisational strategy for the project? | 100 | ☐ Not Applicable |
| 3 | What evidence is there of an individual who has the delegated responsibility for managing the obsolescence risk to this project? | 0 | ☑ Not Applicable |
| *Section 2* | **Supplier** | | |
| 1 | What arrangements are in place, with Supplier(s), to ensure that the obsolescence risk to the project is managed effectively? | 60 | ☑ Not Applicable |
| 2 | How are the payment arrangements defined for the obsolescence mitigations and resolutions that are identified by Supplier(s)? | 20 | ☐ Not Applicable |
| 3 | How has Obsolescence Management capability been considered as a factor for Supplier evaluation? | 90 | ☑ Not Applicable |
| *Section 3* | **Design for Obsolescence** | | |
| 1 | How has obsolescence risk been incorporated within design procedures and processes? | 80 | ☐ Not Applicable |
| 2 | To what extent is modularisation / technology transparency applied in the system? (If so, to what indenture level?) | 50 | ☐ Not Applicable |
| 3 | How has component end of life cycle been considered as part of the design process? | 90 | ☐ Not Applicable |
| 4 | What level of understanding does the Design Team-Leader have of obsolescence and its impact? | 20 | ☐ Not Applicable |
| *Section 4* | **Risk Assessment** | | |
| 1 | How is the risk assessment conducted to identify and implement mitigation processes for the obsolescence risk? | 0 | ☐ Not Applicable |
| 2 | How are decisions from the obsolescence risk assessments, obsolescence approach selections and the derived mitigation actions recorded on an appropriate OM risk register? | 100 | ☑ Not Applicable |

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TOMcat

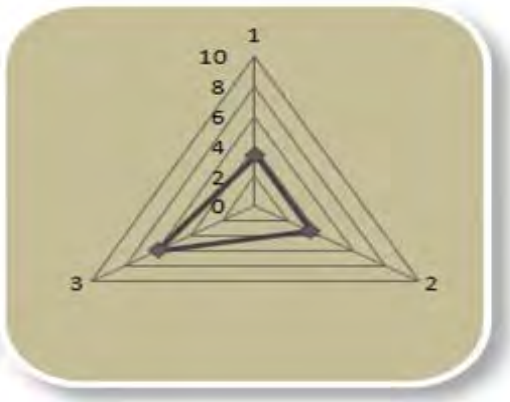
Assessment

## COMPONENT OBSOLESCENCE

Overview

**Total**


**OM Governance**

# Validation

The TOMCAT tool has been subjected to rigorous Industry scrutiny through a number of means:

- JOMWG meetings
- TOMCAT workshops
- Piloting sessions with:
  - Selex Galileo
  - General Dynamics
  - Typhoon Radar Project (BAE Systems)

# Validation

The piloting sessions enabled enhancing the TOMCAT:

- Refining the metrics (eg. use of open-ended questions)
- Refine weighting for metrics
- Assessment range: [0 – 100] (rather than yes/no answers)
- Assess contract stakeholders rather than organisation
- Identify supporting documentation required (evidences)
- Generate supplementary questions for each metric
- Identifying non-applicable metrics / supplementary questions
- Enabling self-assessment
- Web-based application

# Concluding Remarks

- In the transition towards Availability / Capability contracts (Performance-Based Logistics), the MoD requires to have confidence in Industry's capability to manage the risk of obsolescence.
- The TOMCAT tool provides a way to assess the contractor's capability for each particular project.
- The systematic use of TOMCAT across defence will allow:
  - Improving OM capability across the supply chain.
  - Reporting on the status of an OM strategy.
  - Providing incentives for a contractor.
  - Ensuring the risk is placed in the right place.

# Thank you!

# Questions?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